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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,459	07/14/2004	Toshiyuki Ogata	2004-1119A	7571
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513 7590 01/08/2007  
WENDEROTH, LIND & PONACK, L.L.P.  
2033 K STREET N. W.  
SUITE 800  
WASHINGTON, DC 20006-1021

EXAMINER

ASHTON, ROSEMARY E

ART UNIT

PAPER NUMBER

1752

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS	01/08/2007	PAPER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/501,459

Applicant(s)

OGATA ET AL.

Examiner

Rosemary E. Ashton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 46-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 55-57, 60 and 61 is/are allowed.
- 6) ☒ Claim(s) 46-54, 58, 59 and 62-71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 25,29,31,33-35,38-45 have been considered but are moot in view of the new ground(s) of rejection.

2. Claim 46 was not previously claimed thus it cannot be "currently amended". This makes no difference in examination of the claims.

Original claims 1-24 were cancelled in the amendment dated 4/11/06 and new claims 25-45 were added.

Claims 25-45 were cancelled in the amendment dated 10/11/06 and new claims 46-71 added.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

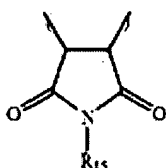
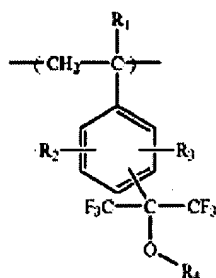
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 46,47,49,50,64-66,70 are rejected under 35 U.S.C. 102(e) as being anticipated by Aoai et al. pat no. 7,138,217.

Aoai teaches a resin for a resist composition. It comprises a monomer having formula (I) and a monomer having formula (V). R15 of the maleimide can be a perfluorocycloalkyl group such a perfluoroadamantyl group (col. 7, lines 19-21, lines 56-64). The resin inherently is transparent to 157 nm and inherently has an adsorption coefficient of equal to or less than 3.0 microns<sup>-1</sup> (col. 2, lines 44-52).

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The resin may have a second monomer, such as a vinyl ether (col. 9, lines 35-41 and col. 10, lines 25-38).

As shown in col. 12-15 formula (I) has acid dissociable groups such as t-butyl, t-boc and alkylethers and has a vinylic double bond as in claim 59.

As to claim 70,71 the polymer is present in the resist acts as a polymer whether it acts like a base polymer or a dissolution inhibitor.

5. Claims 46-48,52-54,58,62-71 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 03/055840. The WO document (in Japanese) is used in the rejection for the date, however, the English equivalent (EP 1460057) is used in rejection for content.

The WO document teaches a perfluoroadamantyl methacrylate, acrylate or trifluoroacrylate. It also teach a compound where the perfluoroadamantyl has one or two hydrophilic hydroxyl groups. In section 73 the document teaches resins of this compounds may be formed and the resin inherently is transparent to 157 nm and inherently has an adsorption coefficient of equal to or less than 3.0 microns<sup>-1</sup> (col. 2, lines 44-52).

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The resist composition in claims 64-69 consists of only a polymer, with no additional additive, thus the polymer is used to reject claims 64-69. Whether it acts as a base polymer or a dissolution inhibitor in the composition is given little weight as it is a polymer in the composition and polymer as used in a resist to be a base polymer. As to it acting as a dissolution inhibitor it has inherent properties to provide its dissolution inhibiting characteristics.

As to claims 70,71 the polymer is present in the resist composition acts as a polymer whether it acts like a base polymer or a dissolution inhibitor.

The resin inherently is transparent to 157 nm and inherently has an adsorption coefficient of equal to or less than  $3.0 \text{ microns}^{-1}$

***Allowable Subject Matter***

6. The following is an examiner's statement of reasons for allowance: Claims 55,56,57,60,61 are allowed because the prior art does not teach a polymer compound of a monomer group having a highly fluorinated alicyclic group in the side chain derived from a vinyl ether; a polymer compound having a highly fluorinated polycyclic group and a second monomer with an acid insoluble group; a polymer compound having a highly fluorinated alicyclic group that has a hydrophilic group and a second monomer with an acid insoluble group; a polymer compound of a monomer group having a highly fluorinated alicyclic group with a hydrophilic group in the side chain and a second monomer derived from a vinylic double bond and a polymer compound of a monomer group having a highly fluorinated alicyclic group derived from a vinyl ether and a second monomer derived from a vinylic double bond.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosemary E. Ashton whose telephone number is 571-272-1326. The examiner can normally be reached on Mon-Fri, 11:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rosemary E. Ashton  
Primary Examiner  
Art Unit 1752

1/3/07

**ROSEMARY ASHTON  
PRIMARY EXAMINER**